

REMARKS/ARGUMENTS

Claims 70-88 are pending. These claims generally find support in the original claims and specification. Specifically, support may be found in the disclosure as follows:

Claims 70 and 73 (Claims 1-4 and 7, page 11, lines 6-8), Claims 71, 72 and 74-76 (Claims 8-10), Claims 77-79 (page 38, lines 19-25), Claims 80-82 (page 11, lines 3-8), Claims 83-86 (Claims 5-6, page 11, lines 14-19), Claims 87-88 (Claims 5, 12, 18, and 22; page 10, lines 17-*et seq.*). Accordingly, the Applicants do not believe that any new matter has been added.

The Applicants thank Examiner Forman for the courteous and helpful interview on February 11, 2005. It was indicated that the new matter rejections could likely be addressed by making minor revisions and by pointing out support in the specification for various terms used in the claims. Various ways to address the rejections based on Nilsson et al. were also discussed.

Rejection—35 U.S.C. 112, first paragraph

Claims 29-69 were rejected under 35 U.S.C. 112, first paragraph, as lacking adequate description. The term “untransformed” has been deleted from independent Claim 70. Instead a wherein clause has been added to the end of the claim to indicate the cell has not been genetically transformed. Clear descriptive support for this language is found on page 11, lines 6-8 which describes normal cells or cancer cells that are not obtained by genetic engineering.

Claim 74 contains the phrase “measured by gene transcription based on an electrophoretic pattern of RNAs recovered from the corresponding cultured cell or electrophoretic pattern of cDNAs corresponding to the RNAs”. Support for isolating and

determining the amount of mRNA or the corresponding cDNA is found on page 24, lines 18-
et seq.

Rejection—35 U.S.C. 103

Claims 29-41, 45-46, 48-49, 50-64, and 65-69 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson et al., U.S. Patent No. 5,578,445, in view of Falb, U.S. Patent No. 5,849,578. Nilsson et al. do not make obvious the present invention, because they do not disclose or suggest a method for detecting an endocrine disrupting substance which acts in combination with an endocrine hormone to produce disruption. For example, the Nilsson method does not involve identifying “one or more unique gene expressions which is present in the gene expression pattern (1), but is absent in gene expression patterns (2) and/or (3)” in order to identify a substance that is an endocrine disruptor.

As clear from new Claim 70, the present invention is directed to a method of detecting an endocrine disrupting substance which causes gene expression only by the combination of the endocrine disrupting substance and an endocrine hormone, not by the endocrine disrupting substance by itself, or an endocrine hormone by itself.

On the other hand, the object of Nilsson is to screen drug candidates that merely have an antagonistic or agonistic effect, that is, an effect of a test compound on increasing or decreasing biological responses mediated via particular hormone receptors (abstract, and col. 1, lines 34-36). For this reason, the Nilsson examples only describe the detection of a known protein produced in response to activation of a hormone receptor. For example, Nilsson exemplifies measuring the expression of the pS2 antigen (col. 5, lines 25-*et seq.*), cathepsin D protein (col. 8, line 34-*et seq.*) or alkaline phosphatase protein (col. 13, line 36-*et seq.*). It is not possible to detect an endocrine disrupting substance as in the present invention which causes a gene expression entirely different from a gene expression that is induced only by the

effect of a particular hormone. Accordingly, the Applicants respectfully submit that this rejection would not apply to the new claims.

Rejection—35 U.S.C. 103

Claims 42-44 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson et al., U.S. Patent No. 5,578,445, in view of Falb, U.S. Patent No. 5,849,578 and Horwitz et al., U.S. Patent 6,750,015. Nilsson and Falb have been addressed above and do not disclose or suggest disclose or suggest a method for detecting an endocrine disrupting substance which acts in combination with an endocrine hormone to produce disruption, nor does Horwitz et al. which was cited for its teaching of SDS-PAGE. Accordingly, the Applicants respectfully submit that this rejection would not apply to the new claims.

Rejection—35 U.S.C. 103

Claim 47 was rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson et al., U.S. Patent No. 5,578,445, in view of Falb, U.S. Patent No. 5,849,578 and Dharmesh et al., PNAS 90:11127. Nilsson and Falb have been addressed above and do not disclose or suggest disclose or suggest a method for detecting an endocrine disrupting substance which acts in combination with an endocrine hormone to produce disruption. Dharmesh was cited for its teaches with respect to glycosylation. However, it does not disclose or suggest a method for detecting the endocrine disruption caused by the combination of a test substance and an endocrine hormone. Accordingly, this basis of rejection may now also be withdrawn.

CONCLUSION

In view of the above amendments and remarks, the Applicants respectfully submit that this application is currently in condition for allowance. Early notice to that effect is earnestly requested.


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